

DRAFT – For comments. (Please send comments to Mohammad Vaziri of PG&E at MYV1@pge.com)

Subject: Trailblazer Criteria for Interconnection of Small Inverter Based Generation to Grid Network System at PG&E.

April 20, 2005

Background:

Currently, neither the IEEE 1547 standard nor the CPUC Rule 21 has any guideline or criteria for interconnection of any type of generation units to the Secondary Grid (Area) Network System. IEEE has recently announced formation of a new technical subcommittee (IEEE 1547.6) to address the interconnection issues. Also, the Department Of Energy (DOE) and the California Energy Commission (CEC) have jointly funded a research project called Distributed Utility Interconnection Testing - Phase 2 (DUIIT – phase II) to determine the concerns and perform relevant tests in the interest of setting guidelines in this area.

Interim Criteria:

On an interim basis, PG&E has developed criteria for interconnection of a small level of inverter based customer generation to its Secondary Grid Network System. Because the maximum level of generation that could be interconnected to the Secondary Grid Network System is unknown at this time, this “Trailblazer” effort should be viewed as a trial basis only, and PG&E reserves the right to suspend it at any time. PG&E has initiated the Trailblazer effort in a proactive attempt aligned with the State of California’s Energy Action Plan.

Error tolerance levels are typically within 5%. Therefore, PG&E determined for this Trailblazer effort only, the aggregate generation a levels below 2% of the verifiable minimum load would be an acceptable starting point at grid network. This is less than half of the typical tolerance level and therefore should not compromise the safety, reliability and operation of the Secondary Grid Network System for our customers.

PG&E expects to replace the Trailblazer criteria when either the IEEE 1547 or CPUC Rule 21 standards are updated to include guidelines for interconnection to the Secondary Grid Network System.

The Trailblazer criteria require that the generation meets all of the following conditions simultaneously:

- 1 – Inverter based units must be less than 11 kW.
- 2 – Units must be “Certified” as prescribed by CPUC Rule 21.
- 3 – Must be less than or equal to 10 % of the interconnecting customer’s verifiable minimum load during the operation of the inverter.
- 4 – The aggregate of all interconnected units to the grid must be below 2% of the grid’s verifiable minimum load.

Notes:

- a) Condition 4 above sets an upper bound on the total capacity of generation that maybe received for a particular secondary grid. Once, this capacity has been exhausted, further interconnection applications to that grid will be denied until appropriate guidelines are added to IEEE 1547 or CPUC Rule 21.
- b) The PV units meeting the above criteria will be interconnected without any additional requirement or metering.
- c) PG&E will reserve the right to suspend, change, modify, or add to the above conditions based on the results from future test reports or guidelines as they become available.
- d) For PV, the minimum load refers to the Day Time minimum.